

REMARKS

An Office Action was mailed on January 11, 2005. Claims 1 - 15 are pending in the present application. With this response, Applicant amends claims 1, 5 and 9. No new matter is introduced. Support for the amendments may be found, for example, at page 3, line 15 through page 4, line 7 of Applicants' specification.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Soga et al. (U.S. Patent 5,737,304) in view of Kiyoshi et al. (Japanese Patent Publication JP 10-208357). Applicants amend claims 1, 5 and 9 to further clarify the nature of their invention, and respectfully traverse this rejection.

In a Response mailed August 27, 2004 to the final Office Action mailed May 28, 2004, Applicants made the following arguments

In independent claims 1, 5 and 9, Applicants disclose a disk drive apparatus comprising a main apparatus having a frame, a disk tray causing a disk to move between a stored position and a drawn-up position relative to the main apparatus such that the disk tray has one surface on which the disk is placed, a disk rotational drive mechanism rotationally driving the disk and an optical pickup mechanism performing at least one of reading stored information from the disk and writing information onto the disk. A movable member supporting the disk rotational drive mechanism and the optical pickup mechanism is rotatably supported at one end relative to the frame. An elevator drive mechanism operates to bring the disk rotational drive mechanism and the optical pickup mechanism closer to or farther away from the disk, with the movable member free to rise and fall. A vibration-absorbing member is provided to the other end of the movable member.

When the disk is moved toward the stored position, the elevator drive mechanism moves the other end of the movable member toward the disk tray, thereby causing the vibration-absorbing member to come into contact

with another surface of the disk tray. In this manner, vibrations caused by rotations of the disk and/or seeking movements of the optical pickup are absorbed by the vibration-absorbing member.

Soga discloses a disk drive apparatus for driving a CD or CD-ROM (see, e.g., abstract of Soga). A base unit 9 may be rotated about insulators 119 at one end (see, e.g., FIGS. 25-26 of Soga). At the other end of base unit 9, an insulator 123 supports a lever 120 which may be engaged for rotating base unit 9 about insulators 119.

In sharp contrast to Applicants' claimed disk drive apparatus, however, Soga's insulator 123 does not constitute a vibration absorbing member that comes into contact with a second surface of the disk tray when the disk is moved toward the stored position by means of the elevator drive mechanism moving the other end of the movable member toward the disk tray. As illustrated by FIGs. 25 and 26 of Soga, insulator 123 does not come into direct contact with disk tray 2 when tray 2 is moved to a stored position. While it may be argued that fixing screw 122 that holds insulator 123 to base unit 9 makes contact with tray 2, fixing screw 122 cannot reasonably be said to constitute a vibration-absorbing member. Moreover, as is apparent from FIG. 26, when tray 2 is in the stored position, fixing screw 122 is positioned in a notch 5 of tray 2. As a result, fixing screw 122 actually fails to come into contact with tray 2.

In the present Office Action, the Examiner acknowledges that Soga fails to disclose that base unit 9 (analogized to Applicants' vibration absorbing member) comes into contact with a second surface of the disk tray when the disk is moved to the stored position. The Examiner suggests that this feature is however taught by Kiyoshi (see, e.g., projecting piece 91 as illustrated in the figures and described at paragraphs [0042] and [0043] of Kiyoshi). Applicants respectfully disagree.

Kiyoshi's projecting piece 91 is provided on a top face of inclination-cam-die object 25, which is a fixed member. Thus, unlike the vibration-absorbing member claimed by Applicants, the projecting piece 91 is not provided on a free end of a rotatably movable member, and does not come into contact with a second surface of the disk tray when the disk is moved toward the stored position by means of the elevator drive mechanism moving the other end of the movable member toward the disk tray. Applicants' claimed member provides a significant advantage over the configuration of Kiyoshi by reducing wear in and maintaining the effectiveness of the vibration-absorbing member.

The Examiner finds these arguments to be unpersuasive. Specifically, the Examiner suggests that Kiyoshi teaches a projection 91 that is brought into contact with a disk tray to reduce vibrations, and that it would have been obvious to one skilled in the

art to replace vibration absorbing member 123 of Soga with projection 91 in order to reduce vibrations.

Applicants thank Examiner Magee for participating in an interview on May 18, 2005 to discuss Applicants' claimed invention and the disclosure of the Kiyoshi reference in greater detail. The following arguments extend from the discussion that took place in this interview.

In the Office Action of January 11, 2005, with reference to independent claims 1, 5 and 9, the Examiner finds that Soga teaches each of the claim limitations, with the exception of disclosing a vibration-absorbing member that comes into contact with the disk tray. Kiyoshi is cited as teaching a vibration absorbing member that is in contact with the disk tray, and the Examiner suggests that Kiyoshi may be combined with Soga by replacing screw 122 of Soga with projecting piece 91 of Kiyoshi in order to meet Applicants' claim limitations relating to the vibration absorbing member. Applicants respectfully disagree.

Applicants respectfully submit that the suggested combination of elements from Soga and Kiyoshi would still fail to produce Applicants' vibration-absorbing member, claimed as being at a movable end of movable member, being rotatably supported at the other end, and coming into contact with a surface of the disk tray when the disk tray reaches its stored position. Applicants reach this conclusion for the following reasons.

With reference, for example, to FIGs. 6, 15 and 26 of Soga, when the base unit 9 of Soga is rotated to an "ascent position", screw 122 does not contact disk tray 2, but rather is accommodated within notch 5 of disk tray 2. As a result, even if screw 122 of Soga is replaced with projecting piece 91 of Kiyoshi, the combination taught by Soga and Kiyoshi still fails to teach or suggest Applicants' claim limitation requiring that the

vibration-absorbing member come into contact with a surface of the disk tray when the disk tray reaches its stored position.

Insulators 123 of Soga (fastened to base unit 9 by means of screws 122) are perhaps more aptly compared to insulators 13 of Applicants' FIG. 1 than to Applicants' vibration absorbing members 29. Applicants submit that Soga provides no teaching or suggestion for bringing insulators 123 or any other portion of the movable end of Soga's base unit 9 into contact with disk tray 2 when the disk tray reaches its stored position.

In addition, Applicants submit that Kiyoshi effectively teaches away from Applicants' claimed movable vibration-absorbing member by disclosing that projecting piece 91 is affixed to cam lever 24, which travels in a horizontal rather than vertical direction. As a result, projecting piece 91 must necessarily remain in contact with tray 2 as cam lever 24 is horizontally moved, and cannot be said to come into contact with the disk tray when the disk tray is in its stored position.

Applicants' invention improves upon the configuration taught by Kiyoshi by enabling the vibration-absorbing member to be removed from contacting the disk tray during the period of time that the tray moves from an extended position to a stored position. Applicants' configuration enables frictional wear of the vibration-absorbing member to be reduced over Kiyoshi's projecting piece 91, which remains in contact with disk tray 2 throughout the tray movement cycle.

Accordingly, Applicants respectfully submit that the combination of Kiyoshi and Soga fails to teach or suggest Applicants' claimed vibration-absorbing member that is positioned to come into contact with a surface of the disk tray when the other end of the rotatably supported movable member is moved toward the disk tray. Rather, Applicants submit that the addition of Kiyoshi to Soga suggests adding Kiyoshi's projecting piece

91 to an upper surface of Soga's cam drive mechanism M5, in much the same manner that projecting piece 91 is configured in Kiyoshi.


Accordingly, Applicants respectfully submit that independent claims 1, 5 and 9 are not made obvious by the combination of Soga and Kiyoshi, and are therefore allowable. As claims 2 - 4, 6 - 8 and 10 - 15 each depend from one of allowable claims 1 and 9, Applicants further submit that claims 2 - 4, 6 - 8 and 10 - 15 are allowable for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1-15, consisting of independent claims 1, 5 and 9, and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he or she is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,


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